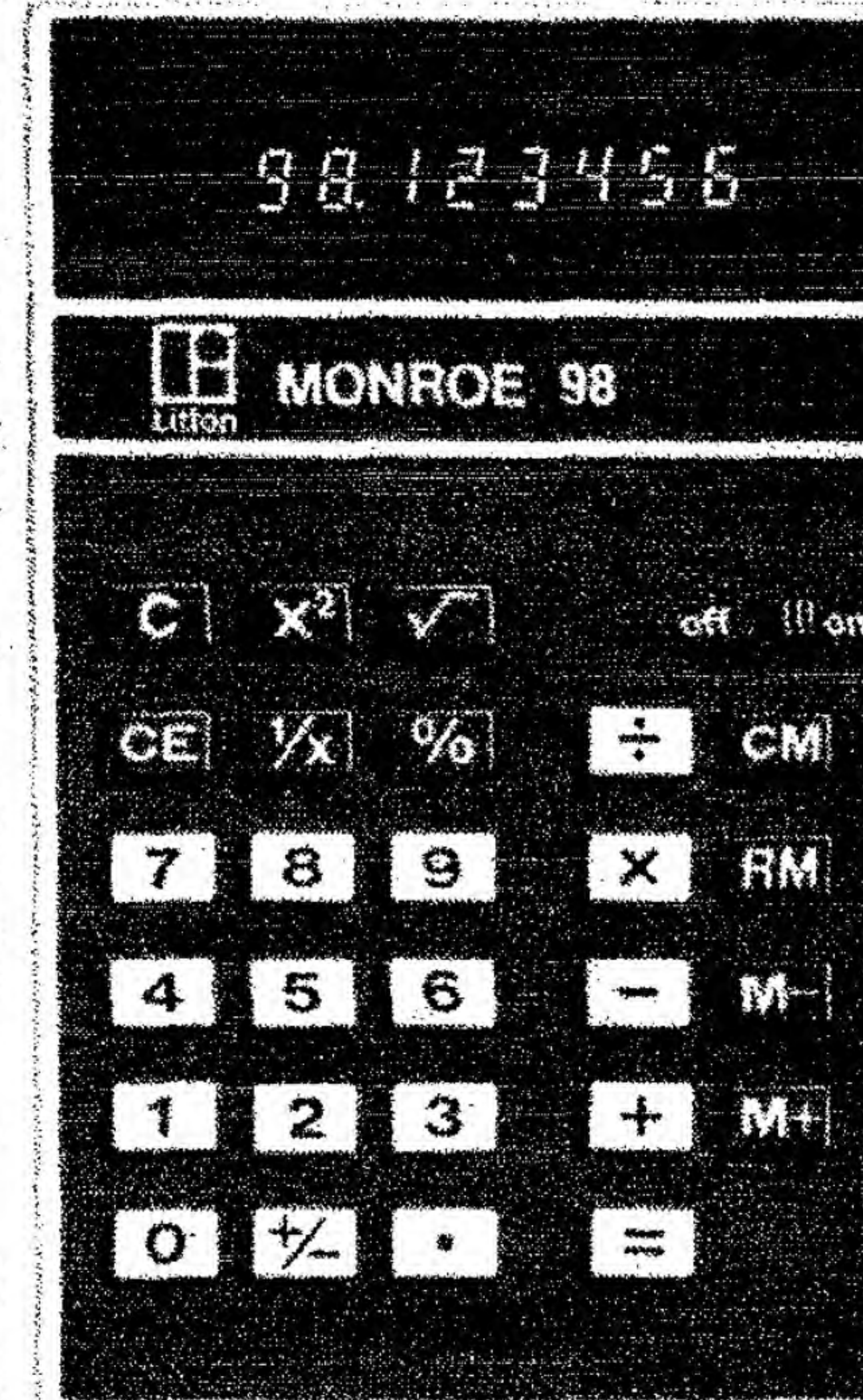


# MONROE 98



**MONROE**

**Monroe, The Calculator Company**

The American Road, Morris Plains, New Jersey, U.S.A.  
Toronto, Canada • Zurich, Switzerland

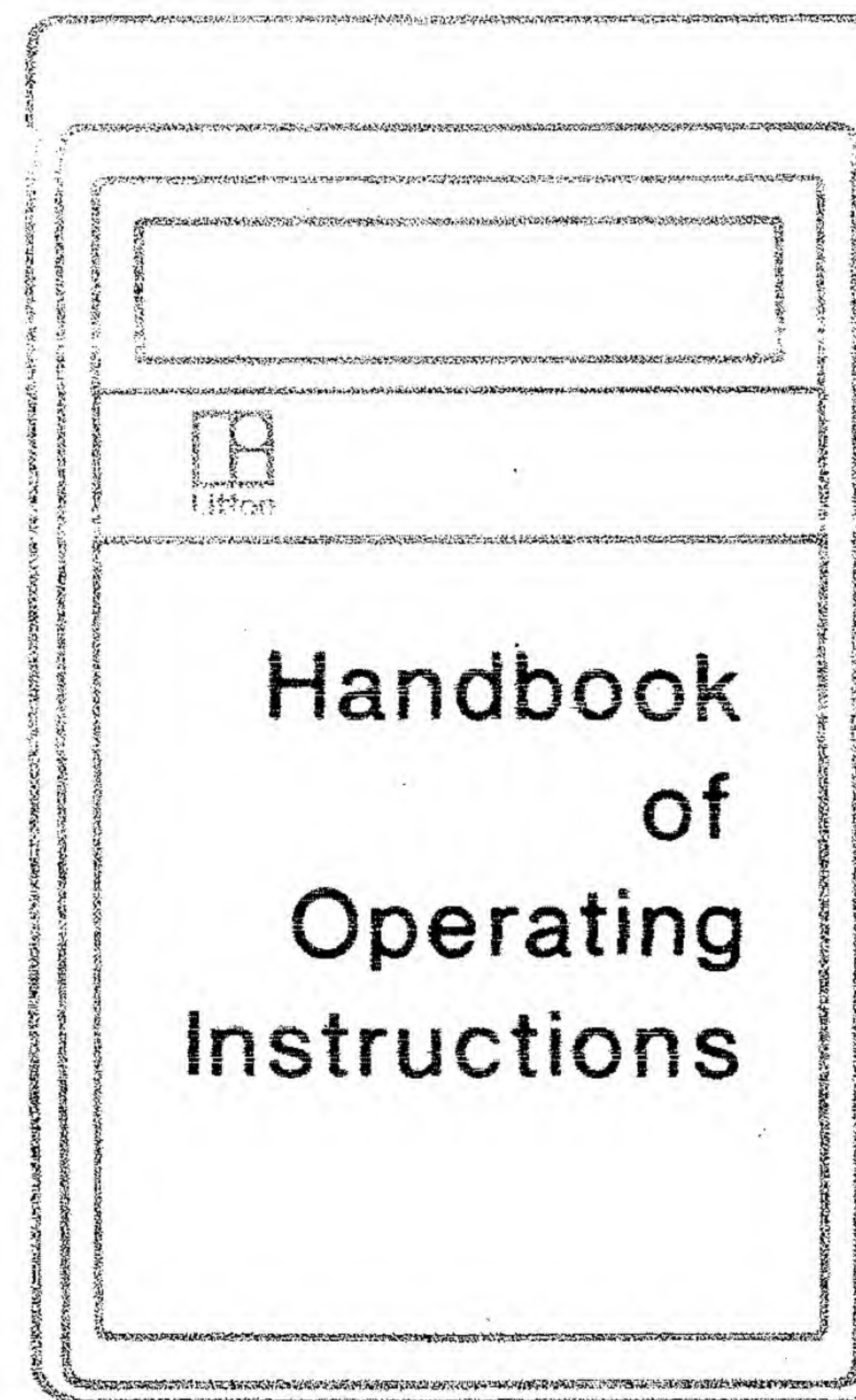
*Sales and Service Throughout the World*

1892-S

Monroe, The Calculator Company



MONROE 98



Monroe, The Calculator Company

© 1976 Litton Business Systems, Inc. • All Rights Reserved

Printed in Japan



# Contents

## *About your 98*

As you become acquainted with your 98 through the various example problems provided in this booklet, it will quickly become evident that this new Monroe was specially designed with your calculating requirements in mind.

The 98 is not just another hand-held calculator. Its portability, ease of operation, power, and dependability, help you solve long and tedious problems with speed and accuracy, wherever you are.

As a leader in the calculator industry, Monroe offers you the added advantage of knowing that over 60 years of experience has been built into the Monroe 98.

To make sure you will be just as happy with your 98 tomorrow as you are today, Monroe offers you service from any one of over 300 branch offices conveniently located throughout the United States and Canada.

Congratulations on your new Monroe!

## **Operating Controls**

---

Basic Controls . . . 4-5

Special Function Keys . . . 5

Memory Keys . . . 5

Operations Causing  
Overflow and Error Conditions . . . 5

## **Applications**

---

Basic Calculations . . . 6

Constants . . . 7

Mixed Calculations . . . 8

Percent Calculations . . . 9

Special Functions . . . 10

Memory Operation . . . 11

## **General Information**

---

Converter/charger . . . 12

Battery Information . . . 12

Care, Service, Accessories . . . 13

Specifications . . . 13



# Operating Controls

## BASIC CONTROLS

### OFF ON ON/OFF SWITCH

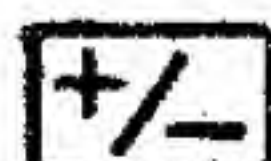
Turns calculator on or off and clears the calculator.

### NUMERIC ENTRY/DECIMAL KEYS



Enters numbers into the display exactly as you would write them.



### CHANGE SIGN KEY

Changes algebraic sign of a number in the display.



### PLUS KEY

Enters number in the display as an addition factor or completes a calculation and sets up the result as an addition factor.



### MINUS KEY

Enters number in the display as a subtraction factor, or completes a calculation and sets up the result as a subtraction factor.



### MULTIPLY KEY

Enters number in display as a multiplicand (first number in a multiplication sequence) or completes a calculation and sets up the result as a multiplicand.



### DIVIDE KEY

Enters number in display as a dividend (first number in a division sequence) or completes a calculation and sets up the result as a dividend.



### EQUALS KEY

Completes addition, subtraction, multiplication, and division.



### CLEAR KEY

Clears the calculator. Clears an overflow or error condition. Does not clear memory.

### CLEAR ENTRY KEY

Clears an incorrect keyboard entry. Clears an overflow condition which was caused by an incorrect keyboard entry.

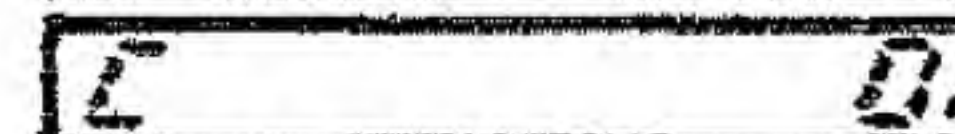
#### Operations Causing Overflow and Error Conditions:

- When entry or result exceeds 8 digits
- Division by zero

Overflow displayed as:

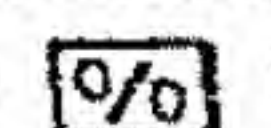


Error displayed as:





### PERCENT KEY

Completes a percentage calculation. Depression of plus or minus following the  key will calculate the percent add-on or discount.

## SPECIAL FUNCTION KEYS



### SQUARE KEY

Calculates the square of a number.



### SQUARE ROOT KEY

Calculates the square root of a number.



### RECIPROCAL KEY

Calculates the reciprocal of a number.

## MEMORY KEYS



### MEMORY PLUS KEY

Adds the number in the display to the contents of memory.



### MEMORY MINUS KEY

Subtracts number in the display from the contents of memory.



### RECALL MEMORY KEY

Recalls contents of the memory into the display; does not clear memory.



### CLEAR MEMORY KEY

Clears contents of the memory; does not recall contents of the memory into the display.



# Applications

## BASIC CALCULATIONS

### $\boxed{+}$ $\boxed{-}$ ADDITION/SUBTRACTION

	Enter	Depress	Read
$8 + 4 - 3 =$	8	$\boxed{+}$	8.
	4	$\boxed{-}$	12.
	3	$\boxed{=}$	9.

### $\boxed{+}$ $\boxed{-}$ REPEAT ADDITION/SUBTRACTION

	Enter	Depress	Read
$3 + 2 + 2 - 4 - 4 =$	3	$\boxed{+}$	3.
	2	$\boxed{=}$	5.
		$\boxed{=}$ $\boxed{-}$	7.
	4	$\boxed{=}$	3.
		$\boxed{=}$	1.

### $\boxed{\times}$ MULTIPLICATION

	Enter	Depress	Read
$-8 \times 4 \times 10 =$	8	$\boxed{+/-}$ $\boxed{\times}$	8.
	4	$\boxed{\times}$	32.
	10	$\boxed{=}$	320.

### $\boxed{\div}$ DIVISION

	Enter	Depress	Read
$\frac{8.05 \times .333}{9 \times 1.08} =$	8.05	$\boxed{\times}$	8.05
	.333	$\boxed{\div}$	268065
	9	$\boxed{\div}$	0.29785
	1.08	$\boxed{=}$	0.275787

## CONSTANTS

The calculator has constants in all basic operations, i.e.; addition, subtraction, (see repeat addition/subtraction), multiplication, division and percent calculations. The entry which precedes the depression of the  $\boxed{\times}$  key in multiplication or the  $\boxed{=}$  in division will be retained as a constant.

### $\boxed{\times}$ CONSTANT MULTIPLICATION

	Enter	Depress	Read
$2 \times 3 =$	2	$\boxed{\times}$	2.
$2 \times 4 =$	3	$\boxed{=}$	6.
$2 \times 5 =$	4	$\boxed{=}$	8.
	5	$\boxed{=}$	10.

### $\boxed{\div}$ CONSTANT DIVISION

	Enter	Depress	Read
$\frac{180.6}{6.02} =$	180.6	$\boxed{\div}$	180.6
	6.02	$\boxed{=}$	30.
$\frac{18.06}{6.02} =$	18.06	$\boxed{=}$	3.
	6.02	$\boxed{=}$	

### $\boxed{\%}$ CONSTANT PERCENT

	Enter	Depress	Read
$125 \times 5\% =$	125	$\boxed{\times}$	125.
$125 \times 6\% =$	5	$\boxed{\%}$	6.25
$125 \times 7\% =$	6	$\boxed{\%}$	7.5
	7	$\boxed{\%}$	8.75



## MIXED CALCULATIONS

Enter problems involving mixed expressions as you would write them.

### MIXED CALCULATION

$\boxed{+}$   $\boxed{-}$   $\boxed{\times}$   $\boxed{\div}$

$$3 + 5 - 2 \div 4 \times 6 =$$

Enter	Depress	Read
3	$\boxed{+}$	3.
5	$\boxed{-}$	8.
2	$\boxed{\div}$	6.
4	$\boxed{\times}$	1.5
6	$\boxed{=}$	9.

$$2.3 \times 5 + 9 \div 3 =$$

Enter	Depress	Read
2.3	$\boxed{\times}$	2.3
5	$\boxed{+}$	11.5
9	$\boxed{\div}$	20.5
3	$\boxed{=}$	6.8333333

## PERCENT CALCULATIONS

$\boxed{\%}$  What is 16% of 150?

Enter	Depress	Read
150	$\boxed{\times}$	150.
16	$\boxed{\%}$	24.

$\boxed{\%}$  What % of 150 is 60?

Enter	Depress	Read
60	$\boxed{\div}$	60.
150	$\boxed{\%}$	40.

$\boxed{\%}$  What is the amount of discount and the cost of an article marked \$30.45 less 12.5%?

Enter	Depress	Read
30.45	$\boxed{\times}$	30.45
12.5	$\boxed{\%}$	3.80625 (discount)
	$\boxed{-}$	26.64375 (cost)

$\boxed{\%}$  What is the tax and the total cost of an article costing \$25.20?  
Tax is 4%

Enter	Depress	Read
25.2	$\boxed{\times}$	25.2
4	$\boxed{\%}$	1.008 (tax)
	$\boxed{+}$	26.208 (total cost)



## SPECIAL FUNCTIONS

### $\boxed{1/x}$ RECIPROCAL

	Enter	Depress	Read
$\frac{1}{47.3} =$	47.3	$\boxed{1/x}$	$\boxed{0.0211416}$

### Square Root

### $\boxed{\sqrt{\phantom{x}}}$ SQUARE ROOT

	Enter	Depress	Read
$\sqrt{25} =$	25	$\boxed{\sqrt{\phantom{x}}}$	$\boxed{5.}$

### $\boxed{x^2}$ SQUARING

	Enter	Depress	Read
$4^2 =$	4	$\boxed{x^2}$	$\boxed{16.}$
$10^2 =$	10	$\boxed{x^2}$	$\boxed{100.}$
$25^2 =$	25	$\boxed{x^2}$	$\boxed{625.}$

## MEMORY OPERATION

### INVOICE

12 @ \$2.35  
13 @ \$4.00  
25 returned @ .25  
12% Discount

4% Tax

Find:

Extensions

Gross

Amount of Discount

Net

Tax Amount

Invoice Total

Enter	Depress	Read	
12	$\boxed{X}$	$\boxed{12.}$	
2.35	$\boxed{M+}$	$\boxed{28.2}$	
13	$\boxed{X}$	$\boxed{13.}$	
4	$\boxed{M+}$	$\boxed{52.}$	
25	$\boxed{X}$	$\boxed{25.}$	
.25	$\boxed{M-}$	$\boxed{6.25}$	
	$\boxed{RM}$	$\boxed{73.95}$	Gross
	$\boxed{X}$	$\boxed{73.95}$	
12	$\boxed{\%}$	$\boxed{8.874}$	Amt. of Discount
	$\boxed{M-}$	$\boxed{8.874}$	
	$\boxed{RM}$	$\boxed{65.076}$	Net
	$\boxed{X}$	$\boxed{65.076}$	
4	$\boxed{\%}$	$\boxed{2.60304}$	Tax
	$\boxed{M+}$	$\boxed{2.60304}$	
	$\boxed{RM}$	$\boxed{67.67904}$	Inv. Total
	$\boxed{CM}$	$\boxed{67.67904}$	



## General Information

### CONVERTER/CHARGER FOR AC OPERATION

Connect the converter/charger to the calculator (illus. 1). Then connect converter to an appropriate AC outlet (illus. 2). Operation on AC can take place with or without batteries.

**NOTE:** Use Monroe Model BC20 only.

### BATTERY INFORMATION

#### Battery Life/Discharge

The Nickel Cadmium rechargeable batteries have a minimum operating time of 10 hours on a full charge. When the batteries are low, the extreme left and right digits in the display will dim.

Further calculations will continue to be accurate, however it is time to recharge batteries.

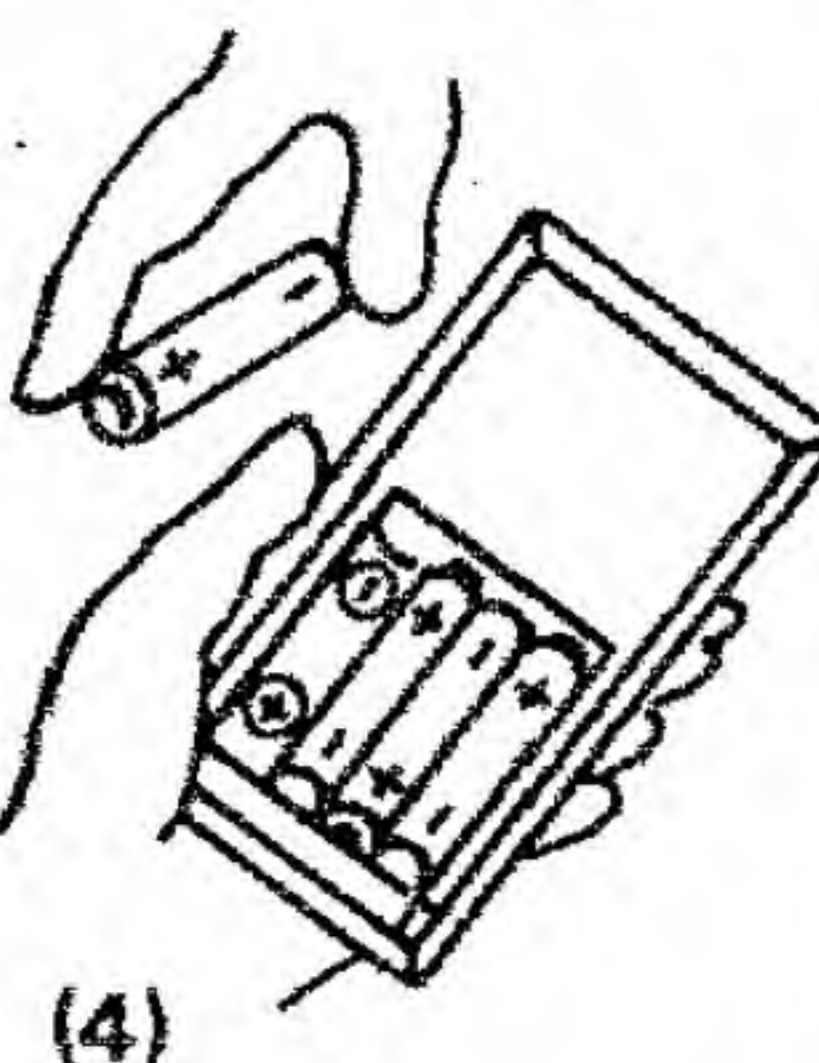
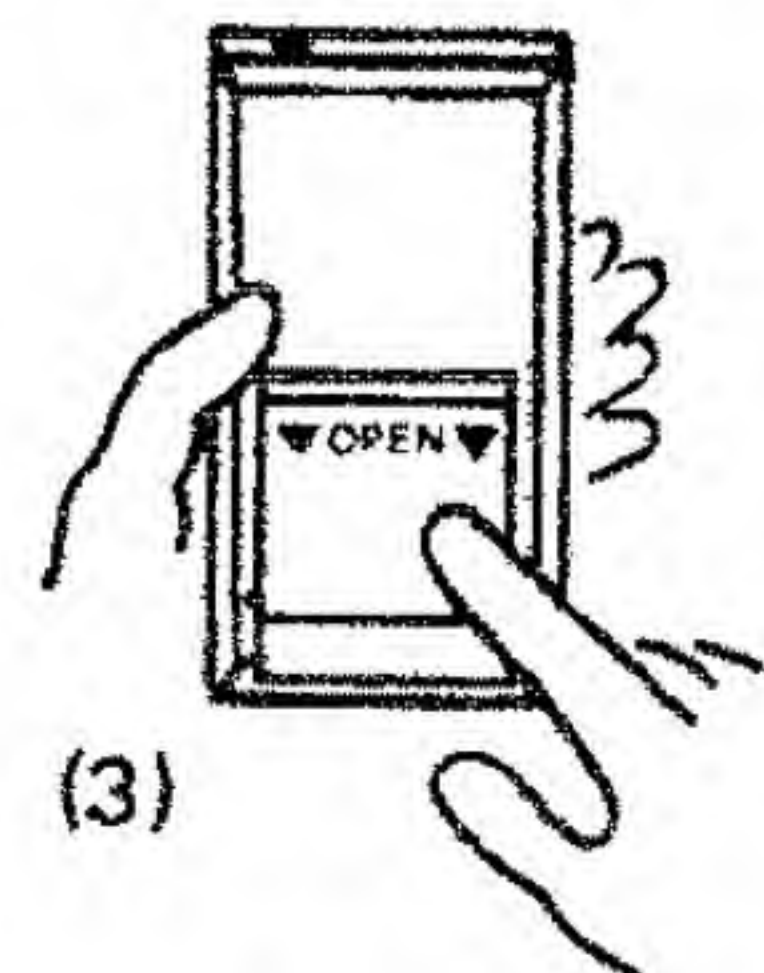
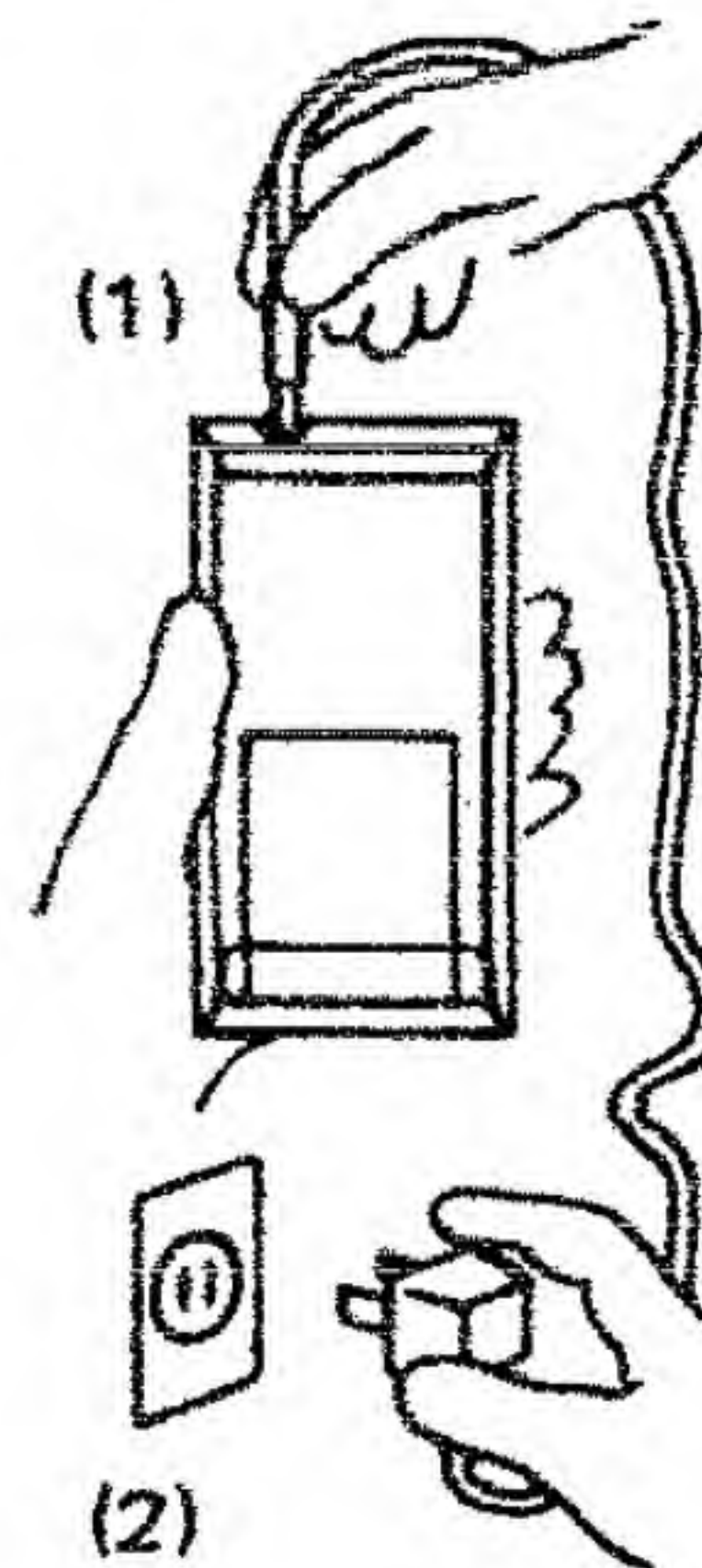
#### Opening the Calculator

Open the back of the calculator by sliding the door in the direction of the arrows (illus. 3).

#### Replacing Batteries

Remove the used batteries and insert new ones making sure the positive (+) and negative (-) symbols on the batteries correspond to the symbols in the battery housing. (illus. 4).

**NOTE:** Use four approved AA Nickel Cadmium batteries only, available from your local Monroe Branch.



(4)

### Care

The soft cover protects the keyboard and electronic components from dirt and dust when the calculator is not in use. Always be sure that the calculator is off before putting it in its cover.

### Service

With the 1,600 factory-trained service personnel in the United States and Canada, Monroe offers prompt and expert service. Technical service, should the need arise, is available at a Monroe branch office listed in your telephone directory.

### Accessories

- Soft contoured cover
- Converter/charger for AC operation — Monroe Model BC20
- (4) AA Nickel Cadmium rechargeable batteries

### Specifications

#### Dimensions:

5.98 in. (L) x 3.48 in. (W) x 1.47 in. (H)  
152 mm (L) x 88.4 mm (W) x 37 mm (H)

Weight: 8.8 ounces (250 grams)

#### Operating Temperature Range:

32°F to 104°F  
(0°C to 40°C)

#### Power Requirements:

(4) AA Nickel Cadmium Batteries  
Monroe BC20 Charger/Converter